

U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		
INTERNATIONAL APPLICATION NO. PCT/DE00/00400	INTERNATIONAL FILING DATE 10 February 2000	PRIORITY DATE CLAIMED 15 February 1999
TITLE OF INVENTION METHOD AND SYSTEM FOR RETRIEVING DATA		
APPLICANT(S) FOR DO/EO/US Hans-Georg BAUMGARTEN et al.		
<p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. <input checked="" type="checkbox"/> This is an express request to immediately begin national examination procedures (35 U.S.C. 371(f)). <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (PCT Article 31). <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). <input type="checkbox"/> has been transmitted by the International Bureau. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)). <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). <input type="checkbox"/> have been transmitted by the International Bureau. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US) <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). <input type="checkbox"/> An oath or declaration of the inventor (35 U.S.C. 371(c)(4)). <input type="checkbox"/> A translation of the Annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Items 10-15 below concern document(s) or information included:</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> An Information Disclosure Statement Under 37 CFR 1.97 and 1.98. <input type="checkbox"/> An assignment document for recording. <p>Please mail the recorded assignment document to:</p> <ol style="list-style-type: none"> <input type="checkbox"/> the person whose signature, name & address appears at the bottom of this document. <input type="checkbox"/> the following: <input checked="" type="checkbox"/> A preliminary amendment. <input checked="" type="checkbox"/> A substitute specification <input type="checkbox"/> A change of power of attorney and/or address letter. <input checked="" type="checkbox"/> Other items or information: <u>Letter to the Examiner Requesting Approval of Changes to the Drawings</u> 		

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[X] The U.S. National Fee (35 U.S.C. 371(c)(1)) and other fees as follows:					
CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS	20 -20=	0	x \$ 18.00	0.00
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SUBTOTAL					860.00
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TOTAL NATIONAL FEE					860.00
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TOTAL FEES ENCLOSED					860.00
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 21171					
PATENT TRADEMARK OFFICE  NAME Mark J. Henry REGISTRATION NO. 36,162					
August 13, 2001 DATE					

Docket No.: 1454.1085

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Hans-Georg BAUMGARTEN et al.

Serial No. NEW

Group Art Unit: To be assigned

Confirmation No.

Filed: August 15, 2001

Examiner: To be assigned

For: **METHOD AND SYSTEM FOR RETRIEVING DATA**

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Before examination of the above-identified application, please amend the application as follows:

IN THE ABSTRACT

Please replace the Abstract originally filed with the Substitute Abstract attached hereto.

IN THE CLAIMS:

1. (ONCE AMENDED) A method for retrieving data, comprising:
 - a) coupling a first computer to a second computer via a communication link;
 - b) determining a location information for the second computer;
 - c) retrieving data relevant to the location information by the first computer, using information from the second computer;
 - d) adapting the location information on the first computer based on the site of the second computer.

2. (ONCE AMENDED) The method as claimed in claim 1, wherein the location information is determined via a satellite navigation system.

3. (ONCE AMENDED) The method as claimed in claim 1, wherein the location information is determined via a cell-oriented communication network.

4. (ONCE AMENDED) The method as claimed in claim 1, wherein during retrieval of data, the first computer provides data which are relevant to the location information.

5. (ONCE AMENDED) The method as claimed in claim 1, wherein the second computer is a mobile unit.

6. (ONCE AMENDED) The method as claimed in claim 1, wherein the data retrieved is data associated with a predetermined region around the site of the second computer.

7. (ONCE AMENDED) The method as claimed in claim 1, wherein the data retrieved is selected from the group consisting of hotel information, taxi information, city guide information, regional event information, traffic information, travel agent information, and automatic cash dispenser information.

8. (ONCE AMENDED) The method as claimed in claim 3, wherein the data retrieved is provided by service providers within the cell oriented communication network.

9. (ONCE AMENDED) The method as claimed in claim 3, wherein a plurality of first computers are provided which are connected to one another via a network.

10. (ONCE AMENDED) The method as claimed in claim 1, wherein data provided with a location information attribute is searched during the retrieval of data, the location information attribute indicating a location, and the retrieval is effected by identifying on the first computer those data having a location information attribute indicating location less than a predetermined distance from a location indicated by the location information determined for the second computer.

11. (ONCE AMENDED) The method as claimed in claim 1, further comprising determining a route from a location associated with the data retrieved to a location indicated by the location information determined for the second computer.

12. (ONCE AMENDED) The method as claimed in claim 11, wherein the location associated with the data retrieved is determined indirectly from the retrieved data.

13. (ONCE AMENDED) A system for retrieving data, comprising:
a communication link to couple a first computer to a second computer;
a determination unit to determine location information for the second computer;
a retrieval device at the first computer to retrieve data relevant to the location information, using information from the second computer;
an updating unit to update the location information on the first computer based on the site of the second computer.

Please ADD the following claims.

14. (NEW) A system for first and second computers coupled by a communication link, comprising:

a determination unit to determine the location of the second computer;
a retrieval device at the first computer to retrieve data relevant to the location of the second computer, in response to information received from the second computer; and
an updating unit to update the location of the second computer within the first computer as the second computer moves.

15. (NEW) The system as claimed in claim 14, wherein the location of the second computer is determined via a satellite navigation system .

16. (NEW) The system as claimed in claim 14, wherein the location of the second computer is determined via a cell-oriented communication network.

17. (NEW) The system as claimed in claim 14, wherein the second computer is a mobile unit.

18. (NEW) The system as claimed in claim 14, wherein the data retrieved is selected from the group consisting of hotel information, taxi information, city guide information, regional event information, traffic information, travel agent information, and automatic cash dispenser information.

19. (NEW) The system as claimed in claim 16, wherein the data retrieved is provided by service providers connected to the cell oriented communication network.

20. (NEW) The system as claimed in claim 14, further comprising a routing unit to determine a travel route from a location associated with the data retrieved to the location of the second computer.

REMARKS

This Preliminary Amendment is submitted to improve the form of the claims as originally filed. A substitute specification and marked-up copy of the original specification are enclosed. Also, a Letter to the Examiner Requesting Approval of Changes to the Drawings are enclosed. No new matter is added to these documents.

It is respectfully requested that this Preliminary Amendment be entered in the above-referenced application.

If any further fees are required in connection with the filing of this Preliminary Amendment, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: August 15, 2001

By: Mark J. Henry
Mark J. Henry
Registration No. 36,162

700 Eleventh Street, NW, Suite 500
Washington, D.C. 20001
(202) 434-1500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims.

1. (ONCE AMENDED) A method for retrieving data, comprising:

- a) [in which] coupling a first computer [is coupled] to a second computer via a communication link;
- b) [in which] determining a location information [item of] for the second computer [is determined];
- c) [In which] retrieving data [which are] relevant [with regard] to the location information [are retrieved] by the first computer, using information from the second computer;
- d) [in which] adapting the location information [kept available] on the first computer [for the second computer dynamically adapts itself to] based on the site of the second computer.

2. (ONCE AMENDED) The method as claimed in claim 1, [in which] wherein the location information is [obtained] determined via a satellite navigation system [(GPS)].

3. (ONCE AMENDED) The method as claimed in claim 1, [in which] wherein the location information is [obtained] determined via a cell-oriented communication network.

4. (ONCE AMENDED) The method as claimed in [one of the preceding claims] claim 1, [in which on] wherein during retrieval of [the] data, the first computer provides data which are [especially] relevant to the location information.

5. (ONCE AMENDED) The method as claimed in [one of the preceding claims] claim 1, [in which] wherein the second computer is a mobile unit.

6. (ONCE AMENDED) The method as claimed in [one of the preceding claims] claim 1, [in which those] wherein the data [which could be of significance for] retrieved is data associated with a predetermined region around the site of the second computer [are relevant with regard to the location information].

7. (ONCE AMENDED) The method as claimed in [one of the preceding claims] claim 1,

[in which, in particular,] wherein the [following] data [are] retrieved is selected from the group consisting of hotel information, taxi information, city guide information, regional event information, traffic information, travel agent information, and automatic cash dispenser information.

- [a) hotel information;
- b) hire car;
- c) city guide;
- d) regional events;
- e) traffic information;
- f) travel agents;
- g) automatic cash dispensers.]

8. (ONCE AMENDED) The method as claimed in [one of] claim[s] 3 [to 7], [in which] wherein the data retrieved is provided by service providers [providing relevant data to the second computer, taking into consideration the location information, are provided in] within the cell oriented communication network.

9. (ONCE AMENDED) The method as claimed in [one of] claim[s] 3 [to 8], [in which] wherein a [number] plurality of first computers are provided which are connected to one another via a network.

10. (ONCE AMENDED) The method as claimed in [one of the preceding claims] claim 1, wherein

- [a) in which the]data [are] provided with [an "] a location information["] attribute is searched during the retrieval of data, the location information attribute indicating a location, and
- [b) in which] the [retriever] retrieval is effected by [determining] identifying on the first computer those data [which are at] having a location information attribute indicating location less than a predetermined distance from a location indicated by the location information determined for the second computer.

11. (ONCE AMENDED) The method as claimed in [one of the preceding claims] claim 1, [in which local information of the data retrieved is used for] further comprising determining a route from a location associated with the data retrieved to a location indicated by the location information determined for the second computer [to the local information].

12. (ONCE AMENDED) The method as claimed in claim 11, [in which] wherein the [local information] location associated with the data retrieved is determined indirectly [by means of] from the retrieved data.

13. (ONCE AMENDED) A[n arrangement] system for retrieving data, comprising:

- [a) in which a first computer is coupled to a second computer via a communication link;
- b) in which a location information item of the second computer can be determined;
- c) in which data which are relevant with regard to the location information can be retrieved by the first computer, using the second computer;
- d) in which the location information kept available on the first computer for the second computer dynamically adapts itself to the site of the second computer.]
a communication link to couple a first computer to a second computer;
a determination unit to determine location information for the second computer;
a retrieval device at the first computer to retrieve data relevant to the location information, using information from the second computer;
an updating unit to update the location information on the first computer based on the site of the second computer.

Please ADD the following claims.

14. (NEW) A system for first and second computers coupled by a communication link, comprising:

- a determination unit to determine the location of the second computer;
- a retrieval device at the first computer to retrieve data relevant to the location of the second computer, in response to information received from the second computer; and
- an updating unit to update the location of the second computer within the first computer as the second computer moves.

15. (NEW) The system as claimed in claim 14, wherein the location of the second computer is determined via a satellite navigation system .

16. (NEW) The system as claimed in claim 14, wherein the location of the second computer is determined via a cell-oriented communication network.

17. (NEW) The system as claimed in claim 14, wherein the second computer is a mobile unit.

18. (NEW) The system as claimed in claim 14, wherein the data retrieved is selected from the group consisting of hotel information, taxi information, city guide information, regional event information, traffic information, travel agent information, and automatic cash dispenser information.

19. (NEW) The system as claimed in claim 16, wherein the data retrieved is provided by service providers connected to the cell oriented communication network.

20. (NEW) The system as claimed in claim 14, further comprising a routing unit to determine a travel route from a location associated with the data retrieved to the location of the second computer.

Abstract

A method for retrieving data is specified in which a first computer is coupled to a second computer via a communication link. A location information item of the second computer is determined. The second computer is used for retrieving data relevant with regard to the location information from the first computer.

MARKED-UP COPY OF ORIGINAL SPECIFICATION

[Description] TITLE OF THE INVENTION

METHOD AND [ARRANGEMENT] SYSTEM FOR RETRIEVING DATA

CROSS REFERENCE TO THE RELATED APPLICATION

[001] This application is based on and hereby claims priority to PCT Application No. PCT/DE00/00400 filed on 10 February 2000 and German Application No. 199 06 210.2 filed on February 15, 1999 in Germany, the contents of which are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

[002] The invention relates to a method and a system [an arrangement] for retrieving data.

[003] Data retrieval is known from the application of a computer network, e.g. the Internet. Due to the volume of data in the computer network, the search for the data which are actually of interest and are relevant is in most cases extremely cumbersome. It is difficult for the user to obtain a suitable search result especially if the user does not know the actual filter for the search.

SUMMARY OF THE INVENTION

[004] It is the object of [the] one aspect of the invention to create a possibility for retrieving data in which a location information item is of assistance in a selective interrogation of the data and a user does not necessarily need to know the corresponding location information.

[005] [This object is achieved in accordance with the features of the independent claims. Further developments of the invention are also obtained from the dependent claims.]

[006] [To achieve this object, a]A method for retrieving data is specified in which a first computer is coupled to a second computer via a communication link. A location information item of the second computer is determined. The second computer is used by the first computer for retrieving data which are relevant with regard to the location information.

[007] The first computer can be used as a data server which keeps the location-related data available to the second computer. A site of the second computer can be optionally automatically determined and the first computer can be informed of this site by [means of] a location attribute

in the request of the second computer. The evaluation of the site on the first computer leads to the result of the interrogation, i.e. the data transmitted to the second computer, being relevant to the second computer with respect to their location information.

[008] As an alternative, the location information can also be predetermined. Thus, relevant location information can be retrieved already for a location of interest without the second computer actually having to be located at this location.

[009] Furthermore, the location information can be interrogated in a computer network [consisting of] having a number of first computers, e.g. the Internet, or selectively at a quite particular computer (data server).

[0010] The location information can be determined, in particular, via a satellite navigation system (Global Positioning System, G[B]PS) or a cell-oriented communication network (e.g. DECT or GSM radio network).

[0011] A further development [consists in that] relates to the second computer [is] being a mobile unit, especially in a vehicle. If the second computer is moving, the retrieved data can be dynamically adapted to a variable location information item. For example, it is possible to determine the current location of the second computer at predetermined times and to send an interrogation to the first computer together with this location information. The data retrieved can update the data previously retrieved.

[0012] A decisive advantage [consists in] that relates to the possibility during the interrogation, numerous regional services [can] may be offered with the automatically determined location information for the user without the latter having to worry about his position. There is a multiplicity of possible services which can be offered to the user with particular relevance to his site (for example the site of the mobile second computer carried by the user), examples of which are the following facilities: hotels, restaurants, automatic cash dispensers, travel agents. Furthermore, information can be provided about regional events, the traffic situation in the user's surroundings or tourist information about towns close by and/or sights. In particular, it should be pointed out that the user does not even need to know his site and is still offered the nearest destinations.

[0013] The interrogation is not restricted to a particular service but, enriched with the attribute of the location information, can cover several networks and/or services: thus, a search on the Internet can, on the one hand, supply the desired information with respect to sights close by [by means of] using the location information but the traffic information can be retrieved from a centralized traffic computer (the attribute of the location information in each case being used as a filter for the flood of possible information).

[0014] It should be pointed out again expressly that a determination of the location information for the second computer can have, in particular, three different modes:

- absolute position finding:
by [means of] global navigation, e.g. by [means of] GPS[:];
- relative position finding:
within a radio network, e.g. in a cluster of a DECT or GSM network; and
- predetermined:

no automatic position finding depending on the actual location of the second computer but predetermination of the desired location for use as selective filter (attribute: location information on interrogation in the computer network and/or at the individual data server).

[001] In the case of finding the position, it is logical to retrieve from the first computer those data which are at a predetermined distance from the location information determined in the second computer with regard to a desired filter (e.g. hotels), e.g.: "all hotels at a distance of five kilometers from the current position". Using this inquiry, a search can be initiated via a suitable interface on the first computer and/or a computer network of a number of first computers. The result of the search is indicated to the user on the second computer. If necessary, it can further specify the search there or request additional information on the data found. It may also be possible to change the search services or computer/computer networks in order to obtain a different result. In practice, it is exactly the combination of a number of search services which guarantees a particularly satisfactory result.

[002] It should also be pointed out that the second computer can have a program which automatically edits data retrieved and/or initiates suitable inquiries at one or a number of computers and represents the edited result to the user. In this case, the logic of the search

engine shifts into the second computer. Here, too, a combination of logic in the second computer and logic in the first computer can lead to a particularly good search result.

[003] The mobile unit can be, in particular:

- a mobile computer, e.g. a PDA (Personal Digital Assistant), a notebook or a radio telephone with an extended range of functions;
- a navigation computer in a vehicle; and
- a measuring computer in mobile use.

[004] Another embodiment [consists in that] relates to the retrieved data [has a]having a local information item (an additional location information item) which is used for determining a path from the location information to the local information.

[005] An example of this is the search for a movie theater nearest to the current location information. The retrieved data supply the nearest movie theater and its address. However, it may be difficult to determine the route to this theater. The route can be determined automatically in that the location information is used as a starting point and the local information is used as a destination point. It is then possible to determine a shortest or a quickest way, for example by [means of] a navigation system.

[006] It is also a further development that the local information is determined indirectly by [means of] the data retrieved. In this case, the data retrieved can comprise a user group. If the addresses of these users are not contained in the data retrieved, an inquiry can be made via an address data base (e.g. via a search for names). Once the address has been found, the current location information can be used as starting point and the address of a user of the group which has been determined can be used as a destination point for finding the route finding.

[007] The route is preferably found dynamically since the position of the second computer (and thus the location information) can change at predetermined times.

[008] In addition, for achieving the object, [an arrangement] a system for retrieving data is specified,

- a) in which a first computer is coupled to a second computer via a communication link; and

- b) in which a location information item of the second computer can be determined;
- c) in which data which are relevant with regard to the location information can be retrieved by the first computer, using the second computer.

[009] This [arrangement] system is particularly suitable for carrying out the method [according to the invention or one of its further developments explained] described above.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] [In the text which follows, exemplary embodiments of the invention are explained and illustrated by means of the drawing, in which:] These and other objects and advantages of the present invention will become more apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings of which:

[Figure] Fig. 1 shows a drawing which represents a block diagram with computers for retrieving data; and

[Figure] Fig. 2 shows a processor unit which can be used as first computer or as second computer.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0011] Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout.

[0012] [Figure] Fig. 1 shows a drawing with a number of computers, a mobile computer 101 of which can retrieve data. The mobile computer 101 (second computer in the above description) retrieves data via a radio interface or a landline network connection (see connections 107 and 108) from at least one first computer (computer 102 or computer network 103 with the computers 104, 105 and 106 in Figure 1). The data are relevant to a location information item determined by the mobile computer 101 (see attributes 109 and 110). As a result of the inquiry provided with the location information, the computers (102 or, respectively, 104 to 106) supply data which have a particular relevance with regard to the location information. The location information is automatically determined by the mobile computer 101: the position can be found in absolute terms by [means of] satellite navigation and in relative terms, the position is found

by the location information of the current cell in a radio network. As an alternative, the location information can also be manually predetermined. In the computers 102 or, respectively, 104 to 106, the location information is taken into consideration transparently, i.e. the "location information" attribute is used as special filter during the interrogation by the mobile computer. The way in which a value has been allocated to the attribute is of no importance to the computers 102, 104, 105 and 106 (transparent service).

[0013] [Figure] Fig. 2 shows a processor unit PRZE. The processor unit PRZE comprises a processor CPU, a memory [SPE] MEM and an input/output interface IOS which is used in different ways via an interface IFC: an output is displayed on a monitor MON and/or output on a printer PRT via a graphical interface. Input is performed via a mouse MAS or a keyboard TAST. The processor unit PRZE also has a databus BUS which provides the connection of [a] the memory [MRM] MEM, the processor CPU and the input/out interface IOS. Furthermore, additional components, e.g. additional memory, data storage (hard disk) or scanners can be connected to the databus BUS.

[0014] The invention has been described in detail with particular reference to preferred embodiments thereof and examples, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention.

SUBSTITUTE SPECIFICATION

TITLE OF THE INVENTION

METHOD AND SYSTEM FOR RETRIEVING DATA

CROSS REFERENCE TO THE RELATED APPLICATION

[001] This application is based on and hereby claims priority to PCT Application No. PCT/DE00/00400 filed on 10 February 2000 and German Application No. 199 06 210.2 filed on February 15, 1999 in Germany, the contents of which are hereby incorporated by reference.

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SUMMARY OF THE INVENTION

[004] It is the object of one aspect of the invention to create a possibility for retrieving data in which a location information item is of assistance in a selective interrogation of the data and a user does not necessarily need to know the corresponding location information.

[005] A method for retrieving data is specified in which a first computer is coupled to a second computer via a communication link. A location information item of the second computer is determined. The second computer is used by the first computer for retrieving data which are relevant with regard to the location information.

[006] The first computer can be used as a data server which keeps the location-related data available to the second computer. A site of the second computer can be optionally automatically determined and the first computer can be informed of this site by a location attribute in the request of the second computer. The evaluation of the site on the first computer

leads to the result of the interrogation, i.e. the data transmitted to the second computer, being relevant to the second computer with respect to their location information.

[007] As an alternative, the location information can also be predetermined. Thus, relevant location information can be retrieved already for a location of interest without the second computer actually having to be located at this location.

[008] Furthermore, the location information can be interrogated in a computer network having a number of first computers, e.g. the Internet, or selectively at a quite particular computer (data server).

[009] The location information can be determined, in particular, via a satellite navigation system (Global Positioning System, GPS) or a cell-oriented communication network (e.g. DECT or GSM radio network).

[0010] A further development relates to the second computer being a mobile unit, especially in a vehicle. If the second computer is moving, the retrieved data can be dynamically adapted to a variable location information item. For example, it is possible to determine the current location of the second computer at predetermined times and to send an interrogation to the first computer together with this location information. The data retrieved can update the data previously retrieved.

[0011] A decisive advantage that relates to the possibility during the interrogation, numerous regional services may be offered with the automatically determined location information for the user without the latter having to worry about his position. There is a multiplicity of possible services which can be offered to the user with particular relevance to his site (for example the site of the mobile second computer carried by the user), examples of which are the following facilities: hotels, restaurants, automatic cash dispensers, travel agents. Furthermore, information can be provided about regional events, the traffic situation in the user's surroundings or tourist information about towns close by and/or sights. In particular, it should be pointed out that the user does not even need to know his site and is still offered the nearest destinations.

[0012] The interrogation is not restricted to a particular service but, enriched with the attribute of the location information, can cover several networks and/or services: thus, a search on the Internet can, on the one hand, supply the desired information with respect to sights close by using the location information but the traffic information can be retrieved from a centralized traffic computer (the attribute of the location information in each case being used as a filter for the flood of possible information).

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- predetermined:

no automatic position finding depending on the actual location of the second computer but predetermination of the desired location for use as selective filter (attribute: location information on interrogation in the computer network and/or at the individual data server).

[0014] In the case of finding the position, it is logical to retrieve from the first computer those data which are at a predetermined distance from the location information determined in the second computer with regard to a desired filter (e.g. hotels), e.g.: "all hotels at a distance of five kilometers from the current position". Using this inquiry, a search can be initiated via a suitable interface on the first computer and/or a computer network of a number of first computers. The result of the search is indicated to the user on the second computer. If necessary, it can further specify the search there or request additional information on the data found. It may also be possible to change the search services or computer/computer networks in order to obtain a different result. In practice, it is exactly the combination of a number of search services which guarantees a particularly satisfactory result.

[0015] It should also be pointed out that the second computer can have a program which automatically edits data retrieved and/or initiates suitable inquiries at one or a number of computers and represents the edited result to the user. In this case, the logic of the search

engine shifts into the second computer. Here, too, a combination of logic in the second computer and logic in the first computer can lead to a particularly good search result.

[0016] The mobile unit can be, in particular:

- a mobile computer, e.g. a PDA (Personal Digital Assistant), a notebook or a radio telephone with an extended range of functions;
- a navigation computer in a vehicle; and
- a measuring computer in mobile use.

[0017] Another embodiment relates to the retrieved data having a local information item (an additional location information item) which is used for determining a path from the location information to the local information.

[0018] An example of this is the search for a movie theater nearest to the current location information. The retrieved data supply the nearest movie theater and its address. However, it may be difficult to determine the route to this theater. The route can be determined automatically in that the location information is used as a starting point and the local information is used as a destination point. It is then possible to determine a shortest or a quickest way, for example by a navigation system.

[0019] It is also a further development that the local information is determined indirectly by the data retrieved. In this case, the data retrieved can comprise a user group. If the addresses of these users are not contained in the data retrieved, an inquiry can be made via an address data base (e.g. via a search for names). Once the address has been found, the current location information can be used as starting point and the address of a user of the group which has been determined can be used as a destination point for finding the route finding.

[0020] The route is preferably found dynamically since the position of the second computer (and thus the location information) can change at predetermined times.

[0021] In addition, for achieving the object, a system for retrieving data is specified,

- a) in which a first computer is coupled to a second computer via a communication link; and
- b) in which a location information item of the second computer can be determined;

c) in which data which are relevant with regard to the location information can be retrieved by the first computer, using the second computer.

[0022] This system is particularly suitable for carrying out the method described above.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] These and other objects and advantages of the present invention will become more apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings of which:

Fig. 1 shows a drawing which represents a block diagram with computers for retrieving data; and

Fig. 2 shows a processor unit which can be used as first computer or as second computer.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0024] Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout.

[0025] Fig. 1 shows a drawing with a number of computers, a mobile computer 101 of which can retrieve data. The mobile computer 101 (second computer in the above description) retrieves data via a radio interface or a landline network connection (see connections 107 and 108) from at least one first computer (computer 102 or computer network 103 with the computers 104, 105 and 106 in Figure 1). The data are relevant to a location information item determined by the mobile computer 101 (see attributes 109 and 110). As a result of the inquiry provided with the location information, the computers (102 or, respectively, 104 to 106) supply data which have a particular relevance with regard to the location information. The location information is automatically determined by the mobile computer 101: the position can be found in absolute terms by satellite navigation and in relative terms, the position is found by the location information of the current cell in a radio network. As an alternative, the location information can also be manually predetermined. In the computers 102 or, respectively, 104 to 106, the location information is taken into consideration transparently, i.e. the "location information" attribute is used as special filter during the interrogation by the mobile computer.

The way in which a value has been allocated to the attribute is of no importance to the computers 102, 104, 105 and 106 (transparent service).

[0026] Fig. 2 shows a processor unit PRZE. The processor unit PRZE comprises a processor CPU, a memory MEM and an input/output interface IOS which is used in different ways via an interface IFC: an output is displayed on a monitor MON and/or output on a printer PRT via a graphical interface. Input is performed via a mouse MAS or a keyboard TAST. The processor unit PRZE also has a databus BUS which provides the connection of the memory MEM, the processor CPU and the input/out interface IOS. Furthermore, additional components, e.g. additional memory, data storage (hard disk) or scanners can be connected to the databus BUS.

[0027] The invention has been described in detail with particular reference to preferred embodiments thereof and examples, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention.

PCT/EP2007/000500

DescriptionMethod and arrangement for retrieving data

5 The invention relates to a method and an arrangement for retrieving data.

Data retrieval is known from the application of a computer network, e.g. the Internet. Due to the volume 10 of data in the computer network, the search for the data which are actually of interest and are relevant is in most cases extremely cumbersome. It is difficult for the user to obtain a suitable search result especially if the user does not know the actual filter for the 15 search.

It is the object of the invention to create a possibility for retrieving data in which a location 20 information item is of assistance in a selective interrogation of the data and a user does not necessarily need to know the corresponding location information.

This object is achieved in accordance with the features 25 of the independent claims. Further developments of the invention are also obtained from the dependent claims.

To achieve this object, a method for retrieving data is specified in which a first computer is coupled to a 30 second computer via a communication link. A location information item of the second computer is determined. The second computer is used by the first computer for retrieving data which are relevant with regard to the location information.

35

The first computer can be used as a data server which keeps the location-related data available to the second

computer. A site of the second computer can be
optionally automatically

determined and the first computer can be informed of this site by means of a location attribute in the request of the second computer. The evaluation of the site on the first computer leads to the result of the 5 interrogation, i.e. the data transmitted to the second computer, being relevant to the second computer with respect to their location information.

As an alternative, the location information can also be 10 predetermined. Thus, relevant location information can be retrieved already for a location of interest without the second computer actually having to be located at this location.

15 Furthermore, the location information can be interrogated in a computer network consisting of a number of first computers, e.g. the Internet, or selectively at a quite particular computer (data server).

20 The location information can be determined, in particular, via a satellite navigation system (Global Positioning System, GPS) or a cell-oriented communication network (e.g. DECT or GSM radio network).

25 A further development consists in that the second computer is a mobile unit, especially in a vehicle. If the second computer is moving, the retrieved data can be dynamically adapted to a variable location 30 information item. For example, it is possible to determine the current location of the second computer at predetermined times and to send an interrogation to the first computer together with this location information. The data retrieved can update the data 35 previously retrieved.

A decisive advantage consists in that during the interrogation, numerous regional services can be

offered with the automatically determined location information for the user without the latter having to worry about his position. There is

a multiplicity of possible services which can be offered to the user with particular relevance to his site (for example the site of the mobile second computer carried by the user), examples of which are 5 the following facilities: hotels, restaurants, automatic cash dispensers, travel agents. Furthermore, information can be provided about regional events, the traffic situation in the user's surroundings or tourist 10 information about towns close by and/or sights. In particular, it should be pointed out that the user does 15 not even need to know his site and is still offered the nearest destinations.

The interrogation is not restricted to a particular 15 service but, enriched with the attribute of the location information, can cover several networks and/or services: thus, a search on the Internet can, on the one hand, supply the desired information with respect to sights close by by means of the location information 20 but the traffic information can be retrieved from a centralized traffic computer (the attribute of the location information in each case being used as a filter for the flood of possible information).

25 It should be pointed out again expressly that a determination of the location information for the second computer can have, in particular, three different modes:

- absolute position finding:
30 by means of global navigation, e.g. by means of GPS:
- relative position finding:
within a radio network, e.g. in a cluster of a DECT or GSM network;
- predetermined:
35 no automatic position finding depending on the actual location of the second computer but

predetermination of the desired location for use as selective filter (attribute: location information on

interrogation in the computer network and/or at the individual data server).

5 In the case of finding the position, it is logical to
retrieve from the first computer those data which are
at a predetermined distance from the location
information determined in the second computer with
regard to a desired filter (e.g. hotels), e.g.: "all
10 hotels at a distance of five kilometers from the
current position". Using this inquiry, a search can be
initiated via a suitable interface on the first
computer and/or a computer network of a number of first
computers. The result of the search is indicated to the
user on the second computer. If necessary, it can
15 further specify the search there or request additional
information on the data found. It may also be possible
to change the search services or computer/computer
networks in order to obtain a different result. In
practice, it is exactly the combination of a number of
20 search services which guarantees a particularly
satisfactory result.

It should also be pointed out that the second computer
can have a program which automatically edits data
25 retrieved and/or initiates suitable inquiries at one or
a number of computers and represents the edited result
to the user. In this case, the logic of the search
engine shifts into the second computer. Here, too, a
combination of logic in the second computer and logic
30 in the first computer can lead to a particularly good
search result.

The mobile unit can be, in particular:

35

- a mobile computer, e.g. a PDA (Personal Digital Assistant), a notebook or a radio telephone with an extended range of functions;
- a navigation computer in a vehicle;
- a measuring computer in mobile use.

Another embodiment consists in that the retrieved data has a local information item (an additional location information item) which is used for determining a path from the location information to the local information.

5 An example of this is the search for a movie theater nearest to the current location information. The retrieved data supply the nearest movie theater and its address. However, it may be difficult to determine the route to this theater. The route can be determined
10 automatically in that the location information is used as a starting point and the local information is used as a destination point. It is then possible to determine a shortest or a quickest way, for example by means of a navigation system.

15

It is also a further development that the local information is determined indirectly by means of the data retrieved. In this case, the data retrieved can comprise a user group. If the addresses of these users
20 are not contained in the data retrieved, an inquiry can be made via an address data base (e.g. via a search for names). Once the address has been found, the current location information can be used as starting point and the address of a user of the group which has been
25 determined can be used as destination point for finding the route finding.

The route is preferably found dynamically since the position of the second computer (and thus the location
30 information) can change at predetermined times.

In addition, for achieving the object, an arrangement for retrieving data is specified,

35

- a) in which a first computer is coupled to a second computer via a communication link;
- b) in which a location information item of the second computer can be determined;

- c) in which data which are relevant with regard to the location information can be retrieved by the first computer, using the second computer.

5 This arrangement is particularly suitable for carrying out the method according to the invention or one of its further developments explained above.

10 In the text which follows, exemplary embodiments of the invention are explained and illustrated by means of the drawing, in which:

Figure 1 shows a drawing which represents a block diagram with computers for retrieving data;

15 Figure 2 shows a processor unit which can be used as first computer or as second computer.

20 Figure 1 shows a drawing with a number of computers, a mobile computer 101 of which can retrieve data. The mobile computer 101 (second computer in the above description) retrieves data via a radio interface or a landline network connection (see connections 107 and 108) from at least one first computer (computer 102 or computer network 103 with the computers 104, 105 and 106 in Figure 1). The data are relevant to a location information item determined by the mobile computer 101 (see attributes 109 and 110). As a result of the inquiry provided with the location information, the 25 computers (102 or, respectively, 104 to 106) supply data which have a particular relevance with regard to the location information. The location information is automatically determined by the mobile computer 101: the position can be found in absolute terms by means of 30 satellite navigation and in relative terms, the position is found by the location information of the current cell in a radio network. As an alternative, the 35

location information can also be manually predetermined. In the computers 102 or, respectively, 104 to 106, the location information is taken into consideration transparently, i.e. the "location information" attribute is used as special filter during the interrogation by the mobile computer. The way in which a value has been allocated to the attribute is of no importance to the computers 102, 104, 105 and 106 (transparent service).

10

Figure 2 shows a processor unit PRZE. The processor unit PRZE comprises a processor CPU, a memory SPE and an input/output interface IOS which is used in different ways via an interface IFC: an output is displayed on a monitor MON and/or output on a printer PRT via a graphical interface. Input is performed via a mouse MAS or a keyboard TAST. The processor unit PRZE also has a databus BUS which provides the connection of a memory MRM, the processor CPU and the input/output interface IOS. Furthermore, additional components, e.g. additional memory, data storage (hard disk) or scanners can be connected to the databus BUS.

DOKS-DEUTSCHLAND

Patent Claims

1. A method for retrieving data
 - 5 a) in which a first computer is coupled to a second computer via a communication link;
 - b) in which a location information item of the second computer is determined;
 - c) in which data which are relevant with regard to the location information are retrieved by the
 - 10 first computer, using the second computer;
 - d) in which the location information kept available on the first computer for the second computer dynamically adapts itself to the site of the second computer.
- 15 2. The method as claimed in claim 1, in which the location information is determined via a satellite navigation system (GPS).
- 20 3. The method as claimed in claim 1, in which the location information is obtained via a cell-oriented communication network.
- 25 4. The method as claimed in one of the preceding claims, in which on retrieval of the data, the first computer provides data which are especially relevant to the location information.
- 30 5. The method as claimed in one of the preceding claims, in which the second computer is a mobile unit.
- 35 6. The method as claimed in one of the preceding claims, in which those data which could be of significance for a predetermined region around the site of the second computer are relevant with regard to the location information.

7. The method as claimed in one of the preceding claims, in which, in particular, the following data are retrieved:

- 5 a) hotel information;
- b) hire car;
- c) city guide;
- d) regional events;
- e) traffic information;
- f) travel agents;
- 10 g) automatic cash dispensers.

8. The method as claimed in one of claims 3 to 7, in which service providers providing relevant data to the second computer, taking into consideration the location information, are provided in the communication network.

15

9. The method as claimed in one of claims 3 to 8, in which a number of first computers are provided which are connected to one another via a network.

20

10. The method as claimed in one of the preceding claims,

- 25 a) in which the data are provided with an "location information" attribute and
- b) in which the retriever is effected by determining on the first computer those data which are at less than a predetermined distance from the location information.

30

11. The method as claimed in one of the preceding claims, in which local information of the data retrieved is used for determining a route from the location information to the local information.

35

12. The method as claimed in claim 11, in which the local information is determined indirectly by means of the retrieved data.

13. An arrangement for retrieving data,

- a) in which a first computer is coupled to a second computer via a communication link;
- b) in which a location information item of the second computer can be determined;
- c) in which data which are relevant with regard to the location information can be retrieved by the first computer, using the second computer;
- d) in which the location information kept available on the first computer for the second computer dynamically adapts itself to the site of the second computer.

5

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FIG 1

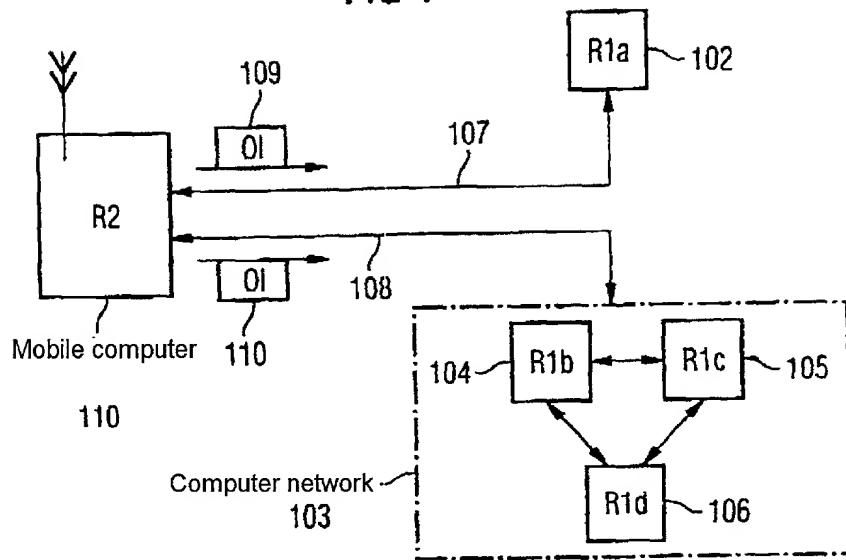
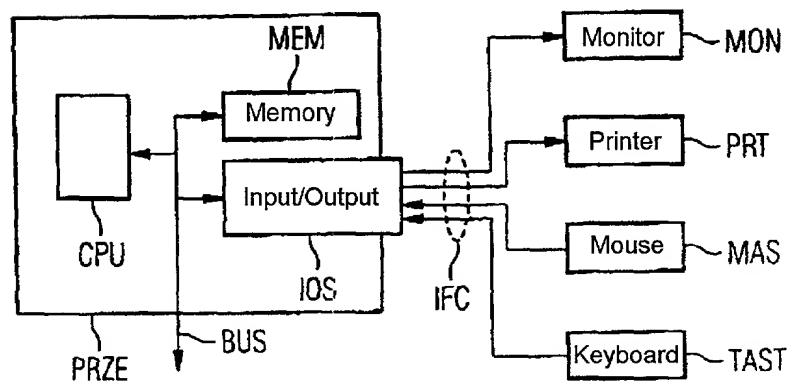
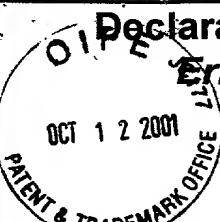


FIG 2





Declaration and Power of Attorney For Patent Application

Erklärung Für Patentanmeldungen Mit Vollmacht

German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

dass mein Wohnsitz, meine Postanschrift, und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

dass ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

Verfahren und Anordnung zum Abruf von Daten

deren Beschreibung

(zutreffendes ankreuzen)

hier beigefügt ist.
 am 10.02.2000 als
 PCT internationale Anmeldung
 PCT Anmeldungsnummer PCT/DE00/00400
 eingereicht wurde und am _____
 abgeändert wurde (falls tatsächlich abgeändert).

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschließlich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäß Abschnitt 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmelddatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

As a, below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Method and arrangement for retrieving data

the specification of which

(check one)
 is attached hereto.
 was filed on 10.02.2000 as
 PCT international application
 PCT Application No. PCT/DE00/00400
 and was amended on _____
 (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

German Language Declaration

Prior foreign applications
Priorität beansprucht

Priority Claimed

19906210.2 DE 15.02.1999 Yes
(Number) (Country) (Day Month Year Filed) No
(Nummer) (Land) (Tag Monat Jahr eingereicht) Ja
Nein

(Number) (Country) (Day Month Year Filed) Yes No
(Nummer) (Land) (Tag Monat Jahr eingereicht)
Ja Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

PCT/DE00/00400
(Application Serial No.)
(Anmeldeseriennummer)

10.02.2000
(Filing Date D, M, Y)
(Anmeldedatum T, M, J)

anhängig
(Status)
(patentiert, anhängig,
aufgegeben)

pending
(Status)
(patented, pending,
abandoned)

(Application Serial No.) _____ **(Filing Date D,M,Y)** _____
(Anmeldeseriennummer) _____ **(Anmeldedatum T, M, J)** _____

(Status)
(patentiert, anhängig,
aufgegeben)

(Status)
(patented, pending,
abandoned)

Ich erkläre hiermit, dass alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und dass ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, dass wissentlich und vorsätzlich falsche Angaben gemäss Paragraph 1001, Absatz 18 der Zivilprozessordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden koennen, und dass derartig wissentlich und vorsätzlich falsche Angaben die Gültigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentes gefährden können.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon

German Language Declaration

VERTRETUNGSVOLLMACHT: Als benannter Erfinder beauftrage ich hiermit den nachstehend benannten Patentanwalt (oder die nachstehend benannten Patentanwälte) und/oder Patent-Agenten mit der Verfolgung der vorliegenden Patentanmeldung sowie mit der Abwicklung aller damit verbundenen Geschäfte vor dem Patent- und Warenzeichenamt: (Name und Registrationsnummer anführen)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

And I hereby appoint

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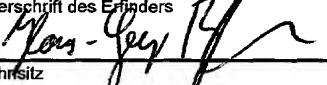
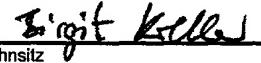
Direct Telephone Calls to: (name and telephone number)

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700 Eleventh Street NW, Suite 500 20001 Washington, DC
Telephone: (001) 202 434 1500 and Facsimile (001) 202 434 1501
or
Customer No. 21171

Voller Name des einzigen oder ursprünglichen Erfinders: HANS-GEORG BAUMGARTEN	Full name of sole or first inventor: HANS-GEORG BAUMGARTEN
Unterschrift des Erfinders 	Datum 16.8.2001
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Staatsangehörigkeit DE	Citizenship DE
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81667 MUENCHEN	81667 MUENCHEN
Voller Name des zweiten Miterfinders (falls zutreffend): BIRGIT KRELLER	Full name of second joint inventor, if any: BIRGIT KRELLER
Unterschrift des Erfinders 	Datum 6.8.2001
Wohnsitz MUENCHEN, DEUTSCHLAND	Residence MUENCHEN, GERMANY
Staatsangehörigkeit DE	Citizenship DE
Postanschrift GABELSBERGERSTR. 103	Post Office Address GABELSBERGERSTR. 103
80333 MUENCHEN	80333 MUENCHEN

(Bitte entsprechende Informationen und Unterschriften im Falle von dritten und weiteren Miterfindern angeben).

(Supply similar information and signature for third and subsequent joint inventors).